

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

(Water Protection Bureau)

Name of Project: Heron Creek Subdivision

Type of Project: Discharge residential strength wastewater to a subsurface drainfield under the Montana Ground Water Pollution Control System permit program

Location of Project: The site is situated in Section 12, T 10N, R 02W or North 46°, 38', 35" north latitude and 111°, 48', 14" west longitude.

City/Town: Helena

County: Lewis and Clark

Description of Project: The proposed Heron Creek Subdivision (HCS) project will consist of 109 residential dwelling units. The permit application reported a maximum daily design flow of 27,250 gallons per day. The wastewater treatment system includes a centralized Advantex recirculation trickling filter (RTF). Residential wastewater will receive primary treatment in individual septic tanks prior to being sent to the recirculation tanks. Secondary treatment will occur in two recirculation tanks, (30,000 and 25,000 gallon capacity) and a RTF. Treated effluent will then be conveyed to a 4,000 gallon dose tank. From this point treated effluent will be sent to one of two 3,400 gallon dose tanks and then pressure dosed to one of two drainfields.

The proposed wastewater treatment facility will discharge via two drainfields. The western most drainfield and the southern drainfield will be deemed outfalls 001a and 001b respectively. The drainfields are located on the hydraulically up gradient side of the HCS. Outfalls 001a and 001b are situated in T10N, R2W, in the northwest ¼ of Section 12, or N 46°38' 35" latitude and W 111° 48' 14" longitude.

Agency Action and Applicable Regulations: The proposed action is to issue an individual MGWPCS discharge permit to a residential strength wastewater treatment operation and specify effluent limitations, monitoring and discharge reporting requirements. The Montana Water Quality Act 75-5-101 *et seq.* Montana Ground Water Pollution Control System Administrative Rules of Montana (ARM) 17.30.10 *et seq.* and Montana Pollutant Discharge Elimination System ARM 17.30.12 *et seq.*

Summary of Issues: The purpose of this action is to regulate the discharges of pollutants to state waters from the regulated facility. Issuance of an individual permit will require the facility to implement design and management practices to prevent pollution and degradation of groundwater. The action will have benefits to water quality.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts). *Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

N = Not present or No Impact will likely occur. *Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] Discharge will increase moisture in the vadose zone. There are no limiting layers present in the soil profile that would impede continued treatment of effluent discharged from the drainfield between the drainfield and ground water. Soil deposits in the area are composed of stratified loam. (See NRCS soils survey information, page 3 of fact sheet)
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] Department developed numeric permit limits ensure that water quality standards will be met and there would be no water quality or nondegradation significance limit exceedances.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] No significant impacts have been determined. Some dust may result during construction.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] No significant impacts have been identified. Disturbed areas are to be covered with native soils and reseeded, without reseeding the native grasses may have a difficult time re-establishing themselves.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] No significant impacts have been identified. The area proposed for construction/proposed discharge will not effect fish, and will have minimal impacts to terrestrial and avian wildlife. The closest surface water capable of supporting significant amounts of wildlife, fish and birds is Spokane Creek, approximately 3,000 feet down gradient of the discharge location.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] No significant impacts have been identified from the EA, however the Montana National Heritage Program reported that Species of concern Canis lupus (Grey Wolf) and Haliaeetus leucocephalus (Bald Eagles), do exist within the designated search local. However the Department has determined that the proposed activities will have minimal effects to the Grey Wolf and or Bald Eagles.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] No significant impacts have been identified from the EA. The Montana State Historic Preservation Office reported a few structures over fifty years of age. They recommend at this time, a cultural resource inventory was unwarranted.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N] No significant impacts have been identified. The proposed project is not located on a prominent topographic feature and will not be visible from heavily populated area. The
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	[N] No significant impacts have been identified from the EA. Hydraulic conductivity values indicate a rapid rate of groundwater movement. Ground water levels range from approximately 50-70 feet below the surface. Potential for ground water depletion is minimal. Impacts to agricultural resources will be limited to the foot print of the proposed subdivision property boundaries.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No, however if numeric effluent limits are not met, or the groundwater quality standards are exceeded at the edge of the mixing zone, effects could be seen in the down gradient surface water.

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] No significant impacts have been identified. There is potential for health and safety risks to arise during construction. With added vehicle traffic, there is potential for increased motor vehicle accidents.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] The propose activities will remove from agricultural use, approximately ¼ of the northwest corner of Section 12, T 10N, R 02W such activities are not expected to alter the local economy.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated	[N] No significant impacts have been identified. The proposed activities will likely increase the number of jobs

IMPACTS ON THE HUMAN ENVIRONMENT	
number.	during and after construction of the subdivision. Employment will be needed to maintain the subdivision and the wastewater treatment system.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] No significant impacts have been identified. The tax base and revenues will likely increase as a result of the proposed activities.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No significant impacts have been identified EA. The facility is located off of rural roads and the increased activity is likely to increase traffic on these roads.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No significant impacts have been identified from the EA.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] No significant impacts have been identified from the EA. Accesses remain unaltered. There is no recreational potential within the tract.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[Y] The wastewater treatment system is for the proposed Heron Creek Subdivision. As a result of this project the population is expected to increase.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No significant impacts have been identified from the EA.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No significant impacts have been identified from the EA.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No significant impacts have been identified from the EA
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] No significant impacts have been identified from the EA
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis	[N] No significant impacts have been identified from the EA

IMPACTS ON THE HUMAN ENVIRONMENT	
is required.	
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[N] No significant impacts have been identified from the EA

23. **Description of and Impacts of other Alternatives Considered:**

A. No Action: Under the 'No Action' alternative the Department would not issue an individual ground water discharge permit under the Montana Ground Water Pollution Control System administrative rules. The proposed action will have environmental benefits compared to leaving the facility unpermitted.

B. Approval with modification: The Department has not identified any necessary modifications to grant approval.

24. **Summary of Magnitude and Significance of Potential Impacts:**

Impacts were assessed with the assumption that the permittee will comply with the terms and conditions of the permit. Violations of the permit could lead to significant adverse impacts to state waters. Violations of the permit are not an effect of the agency action, because the permit itself forbids such activities. However, the Department has taken steps to ensure that violations do not occur. The terms of the permit have been clarified and modified in response to comments from regulated parties, the public and other agencies. The Department provides assistance to applicants in understanding and implementing the requirements of the permit. The Department also conducts periodic inspections of permitted facilities, and identifies potential problems with design or management practices. If violations of the permit do occur, the Department will take appropriate action under the water quality act. Section 75-5-617, MCA. Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

25. **Cumulative Effects**: The issuance of this individual MGWPCS discharge permit would not have cumulative effects because the permit prohibits pollution and degradation of state waters.

26. **Preferred Action Alternative and Rationale**: The preferred action is to authorize Sussex Development Inc. under an individual MGWPCS Discharge Permit. This action is preferred because the permit program provides a regulatory mechanism for protecting and improving water quality by applying control technology to the source discharge of domestic wastes generated at the proposed wastewater treatment facility.

Recommendation for Further Environmental Analysis:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

Rationale for Recommendation:

27. Public Involvement: This draft EA will be posted on the Department web page: <http://www.deq.state.mt.us/ea.asp>. For copies of the draft EA or to submit comments, write or call the Montana Department of Environmental Quality c/o Dianne Beaman, P.O. Box 200901, Helena MT 59620-0901, telephone (406) 444-3080. Comments will be received for 30-days after the date of the signature below.

The Department maintains a list of persons who have expressed an interest in all environmental water quality related issues. The Department will send a copy of this document to all persons who have submitted their name, address, and telephone number to the Department for the purpose of being included on the water quality interested parties' mailing list.

28. Persons and agencies consulted in the preparation of this analysis:
Damon Murdo, Cultural Records Manager, Historical Preservation Society
Montana Bureau of Mines and Geology Web site
Montana Fish and Wildlife Web page, animal species information
Natural Resource Information System, Montana State Library

EA Checklist Prepared By: Louis Volpe

Louis Volpe

(Name)

October 1, 2008

Date

EA Revisions and Corrections: As a result of comments received during the 30-day public comment period

Louis Volpe

Approved By:

Jenny Chambers, Chief
Water Protection Bureau

Signature

Date